



The Minuteman Repeater Association
*A non-profit organization providing communications infrastructure and volunteers for
community and emergency events.*



The Minuteman

Sligo is Back!

Volume 44, Number 1

September 2014

Membership Meeting ~ Wednesday, Sept 24 ~ 7 PM
The Art and Science of Radio Direction Finding
Bob Ravenstein, W1FDR

Bob is an ardent fox hunter and has a great home-built dish he often uses. He recently entered the ARDF < <http://www.homingin.com/farsnews.html> > and < <http://www.bostonardf.org/?event=the-fourteenth-usa-ardf-championships-boston-massachusetts-june-5-8-2014> > and won a silver medal.

Location: Northborough Public Library

Directions: see page 3

Talkin: 147.27

President's Corner — SLIGO is BACK!

As you may have heard, the club's main site in Marlborough is finally being restored to its full glory. Work began September 11 to put our five antennas back on the top of the water tank, and is likely finished by the time this article gets to your inbox. It's been a trying time for club members and officers alike as we patiently, and perhaps sometimes impatiently, waited for the go-ahead from city officials. That go ahead came the last week of July. In the next few weeks, we made the last few purchases needed and awaited the availability of the tower climber.

I want to thank all club members that continued their memberships through this period - even though for many their "favorite repeater" was made inaccessible from many locations. I hope you enjoy the renewed coverage. If you know of someone that got discouraged and let their membership lapse, please let them know that things are back to normal and invite them to rejoin the club.

Have you renewed your membership yet?

All 2014 memberships expired on August 31st! Time to renew either on the Member's login link at www.mmra.org or by U.S. Mail with a check to MMRA, PO Box 669, Stow, MA 01665.

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About the Minuteman Repeater Association

The Minuteman Repeater Association (MMRA) is dedicated to Amateur Radio and public service. The MMRA maintains a large system of repeaters in Eastern Massachusetts.

The MMRA meets (usually) on the 3rd Wednesday of each month from September to June. Meeting times, locations, and talk-in frequency vary and are announced in this newsletter and on weekly nets. Meetings are open to all interested parties. Guest speakers and programs of general interest occur in September, November, January, March, and May. The intervening meetings are also open to all members and are for general business.

The Minuteman newsletter is Emailed one week before each general interest meeting. Members are encouraged to submit articles which can be sent to the editor at newsletter@mmra.org. The deadline for articles is the last Friday of the month preceding the meeting.

Each Tuesday evening at 8PM the MMRA links most of the repeaters for an open net. The topic is "Technical Information and Other Stuff". Join us!

Membership in the MMRA is open to all radio amateurs. Annual dues are \$25 per individual or \$35 per family. See our website for details.

Email to the club leadership should be sent to contact@mmra.org. The MMRA maintains a web site at: <http://www.mmra.org/>

An email distribution list for club members named "MMRA" is at: www.yahoopgroups.com/.

You can also follow us on twitter @mmraham and like us on Facebook: <https://www.facebook.com/mmraham>.

No part of this newsletter can be copied or posted elsewhere without prior approval from the club. Your cooperation in this matter is appreciated.

MMRA QRM Policy

MMRA members and all other operators are strongly encouraged to report repeater activity that does not abide by Part 97 rules or accepted amateur radio practice to the board of directors at contact@mmra.org or via other means.

The most effective way (and probably the only effective way) to deal with an individual causing QRM is to NOT engage that individual on the air. Please include the time and date of any incident. Measures are being taken to make audio recordings of repeater activity.

Repeater and Frequency Information

Check <http://www.mmra.org/repeaters/index.html> for up-to date info

Band	XMTR Location	Freq	PL	Call	Linking	
					To Hub 1	To Hub 2
MMRA Voice Repeaters						
10m	Marlboro	29.680	131.8	W1MRA	PTL	PTL
6m	Marlboro	53.810	71.9	W1BRI	PTL	PTL
2m	Brookline	145.160	—	W1MRA	D-Star	
	Belmont	145.430	67.0	N1DDK	—	—
	Mendon	146.610	146.2	AE1C	FTL	PTL
	Quincy	146.670		W1BRI	PTL	PTL
	Burlington	146.715		KC1US	PTL	PTL
	Weston	146.790		N1BE	PTL	PTL
	- also C4FM Digital				Not linkable until 14 June	
	Boston	146.820	146.2	K1BOS	FTL	PTL
	Remote receive in Brookline Boston: PLin = 127.3					
Marlboro	147.270	146.2	W1MRA	PTL	PTL	
1½m	Hopkinton	223.940	103.5	KB1LOY	PTL	FTL
	Quincy	224.400		N1KUG	PTL	FTL
	Weston	224.700		N1NOM	PTL	FTL
	Marlboro	224.880		W1MRA	PTL	FTL
70cm	Lowell	442.250	88.5	K1LVF	FTL	PTL: 446.775
	Weston *	442.700		W1MRA	Network Hub 2 (PTL to Hub 1)	
	Burlington	446.775		W1DYJ	FTL	PTL
	Southboro	449.575		W1BRI	PTL	PTL
	Marlboro *	449.925		W1MRA	Network Hub 1	
33cm	Boston *	927.0625	D244	K1RJZ	PTL	PTL
	Marlboro *	927.700		W1MRA	PTL	PTL

MMRA Other Systems

Marlboro		144.390	none	W1MRA	APRS Digipeater
???		145.630	146.2	W1MRA	Fox Box
*Internet	HUB1— 449.925: IRLP node 4133 / Echolink node 4133				
	HUB2 — 442.700: IRLP node 4136; Connected to 220 Reflector 9124 on Tuesdays				
	927.0625: IRLP node 4977			Normally linked to the NE900 Reflector, 9125. Linked to MMRA via IRLP for the TIAOS net. Normally linked together.	
	927.700: IRLP node 4978				

Notes: FTL = Full Time Linked (or default state)
PTL = Part Time Linked (on schedule or demand)
Note — a repeater can be linked to only one Hub at a time.

Membership Meeting ~ Wednesday, Sept 24 ~ 7 PM

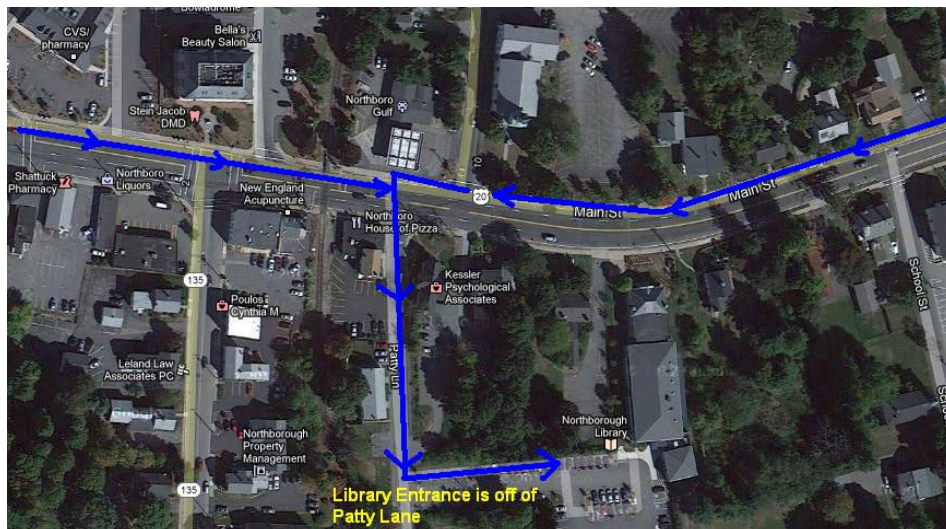
The Art and Science of Radio Direction Finding

Bob Ravenstein, W1FDR

Directions to The Northborough Free Library

Directions from I-495:

- From I-495, take Exit 24B which is Rt. 20 West toward Northborough.
- Follow Rt. 20 West about 3.5 miles, into the center of Northborough..
- Opposite the Gulf Station on the right, turn left into Patty Lane.
- The Northborough Free Library parking lot will be on the left.



LIBRARY PARKING

Patty Lane is right across from the Gulf station. Follow Patty Lane to the library parking lot.

The red brick building next to the library has a tempting driveway, being right next to the library, but it is private property. Please respect the owners' property, and use the library lot. Additional parking is available on the corner of Hudson and Pierce, or at Town Hall.

Traffic exiting Patty Lane should stay to far right, even for left turns, to avoid traffic turning in. The lane closest to the pizza shop is for INCOMING traffic ONLY from Rt. 20 eastbound.

Bryron Piette, K1YCQ, SK

Thanks to Tom Turner, KB1OQA

Bryron Piette, K1YCQ, passed on 3 July. Byron was very active in NTS on various Nets in CT, MA, and RI, served as Communications Officer for his home town of Somerset and also was a Skywarn Spotter.

He often joined the TIAOS net on Tuesday evenings.

New Trustees for MMRA Repeaters

By a vote of the Executive Board, **James Lee, N1DDK** was elected Trustee of Belmont 145.43 repeater and **James Cahill, KB1LOY**, was elected Trustee of Hopkinton 223.94 repeater.

Both N1DDK and KB1LOY have made significant contributions toward the Sligo shelter project.

Unlocking your Car with your Brain

Larry, W1DYJ, Editor

This is a great way to demonstrate some of the laws of physics, especially if you've lost your car in a parking lot. I tried this and it works — and proves that my brain is just a bag of salt water! The video is about 4 minutes long. [Thanks to my friend Bruce, W1ZE.]

www.youtube.com/embed/0Uqf71muwWc?feature=player_embedded

Sligo is Back! — The Story

Bob DeMattia, President — K1IW

In May, 2012 the City of Marlborough began the phase of its Sligo Hill water tower restoration project in which the tower's iconic cone-shaped top was to be removed. The tower, built in the late 1800's, had fallen into disrepair. The iron structure was rusted through in many places. Earlier phases of the restoration included sandblasting and painting of the tower's sides and removal of the remains of the towers 6' diameter standpipe. These were completed without disruption to MMRA. However, for the next phase to proceed, MMRA's antennas (as well as all others) needed to be removed. We were told that we would be back up in about three months.

True to schedule, the tower's new, RF-transparent cone was installed the following August. Having experienced three months of terrible coverage on the clubs' flagship repeaters, members were looking forward to completion.

Alas, things took a turn for the worse. There were issues with the tower's installation. Months passed as the city negotiated with the installers. Finally, almost a year later, in mid-2013, an agreement was reached. However, the club now had to wait while the paying tenants completed their work. In November 2013 we were told we could relocate our shelter to its new position inside the RF yard perimeter. On the Wednesday before Thanksgiving, we found out that a crew hired by National Grid would have a 30-ton crane on site at the end of the following week. It was tough getting hold of someone at the company during the holiday week, but miraculously we were able to get permission to utilize the crane, while it was onsite, to relocate the shelter. We also managed to get a National Grid work order completed so that the service mains would be disconnected in time for the move. On December 6, the shelter was relocated. It took about 3 days for our electrician to wire temporary service to the shelter, another week to get the installation inspected and approved, then two days to get it powered up. We really felt like we were on our way.

Amidst all this, winter happened! December 12 was a very frigid day and the tower crew tried but couldn't make very much progress on an installation. To make

matters worse, five days later the city called and asked us to hold up for a couple weeks while other issues were resolved. It didn't really matter much because winter continued for the next 4 months, making work impossible. During this time very few days saw forty degrees and most were in the teens and twenties.

When spring finally arrived, the club still hadn't received a go-ahead from the city. We made a push to get it done in time for the Boston Marathon, but the city just wasn't ready. April passed. After a few insistent (but not pester-ing!) phone calls, we received a call back from the city - curiously enough while I was on the way to the Dayton Hamvention - stating that we needed to wait at least four more weeks.

June passed, and then almost all of July when I finally received the phone call we'd been waiting for. It took a few weeks to order and receive supplies and to schedule the climbing company, but on September 11 our installation began.

The 147.27 antenna was previously mounted on the top of the tank, now it joins the others on the perimeter. Hopefully the 20 or 30 feet or so difference won't affect things much. However, the 53.91, 224.880, 449.925, 927.700, and the APRS antennas are all mounted on the tank perimeter. Prior to the restoration, the iron cone cast a large RF shadow for these antennas. The new cone-top is made of RF-transparent material. So this should mean no more shadows and better coverage. Hopefully, the wait was worth the increased coverage. Please send your coverage reports to contact@mmra.org or better yet, check into our club net on Tuesday nights, 8PM, and tell us in person.



This is why we hire professionals!
[KG1H Photo]

The SLIGO Timeline

- 5/11/2012** Antennas removed from water tank
- 8/2/2012** New cone top is installed on water tank
- 9/9/2012** City is not happy with installation of cone. All future work is put on hold while the situation is resolved.
- 7/17/2013** Cone installed is approved by city - MMRA will be able to move antennas in a few weeks
- 11/20/2013** MMRA given go ahead to move shelter and relocate antennas to top of tank
- 11/27/2013** We discover that National Grid will have a crane on site on December 6
- 11/30/2013** All MRW repeaters except '27, '925 off-air
- 12/4/2013** Power cut, all repeaters off air & removed from shelter, site is graded by landscaper
- 12/6/2013** Shelter is relocated courtesy of National Grid and Hampden Communications
- 12/7/2013** Shelter is repopulated
- 12/8/2013** Cable Bridge installed
- 12/12/2013** Attempt to install antennas fails due to icy conditions on tower
- 12/15/2013** Electrician completes temporary service work
- 12/16/2013** Electrical Inspection complete
- 12/19/2013** Received call from City of Marlborough - hold off on reinstalling antennas until they talk to AT&T
- 12/21/2013** Electric service restored to Sligo.
- 12/22/2013** '27, '925 back on air from temporary antennas. Temperature drops from 53 to 39 degrees in a few hours
- 12/22/2013** 3/31/2014 Sligo (& the northern half of the US) enters a worm hole, transporting it to 80 deg N latitude and rendering all outdoor work of any kind an exercise in futility
- 2/1/2014- 4/22/2014** Ongoing conversations with AT&T yields info that AT&T has no plans to do anything on Sligo Hill
- 4/1/2014** Reverse worm hole returns US to its normal weather conditions
- 4/22/2014** Set up appointment with City of Marlborough official
- 4/29/2014** Meeting: City Official tells me things should be OK to proceed - call him back in one week to confirm
- 5/6,9,13/2014** Called official, left message (three times)
- 5/16/2016** Secretary calls back - official is waiting for additional information and will call me back in two weeks.
- 6/20/2014** Follow-up call to May 15 response
- 6/27/2014** No answer to follow-up call, tried again
- 7/11/2014** Spoke to a different official at city who said he will look into it
- 7/22/2014** Spoke to 2nd official again - we will know something within a week
- 7/24/2014** Received call back - we have a go. Immediately contacted tower climber is in on vacation next week. Need to call him when he gets back.
- 8/4/2014** Called tower climber, disconnected in middle of call. No answer when I call back.
- 8/5-8/2014** All attempts to contact climber fail
- 8/9/2014** Heard back from climber: Phone dropped off tower during 8/11 phone call. Took a few days for a replacement.
- 8/15/2014** Site visit to review what needs to be done. Need to order 2 coax runs.
- 8/26/2014** Coax arrives. Call climber to set up date for work to be done.
- 9/11-12/2014** Tower work
- 9/13/2014** MMRA work crew connects and checks everything. Some noise on 53.81 and 147.27 that needs to be worked out but everything is essentially on the air.



Highlights from the May Membership Meeting

Annual Meeting: Officers Report to the Membership & Elections

Minuteman Repeater Association

Officers Report to Members & General Elections

May 21, 2014



Election Results

President	Bob DeMattia	K1IW
Vice President	Steve Telsey	N1BDA
Secretary	John McGovern	W1JMC
Treasurer	Kevin Paetzold	K1KWP
Clerk	Bob Evans	N1BE
Director »2016	Clark Conti	N1NVK
Director »2016	Mike Neilsen	W1MPN

Repeater Report - Bob DeMattia, K1IW

Boston/Prudential	146.820	☺ Added bandpass filter 4/17
Boston/One Financial Center	927.0625	☺
Belmont	145.430	☺ MMRA Now Owns
Brookline	145.160 D-Star	☺ On-Air 6/27/2013
Burlington	146.715 446.775	☺ ☺
Hopkinton	223.940	☺
Lowell	442.250	☺ Replaced antenna 1/9/2013
Marlborough/East	29.68 receiver in Weston 53.81 receiver in Marl. West	☺ Antenna repaired 5/20/2013 ☺
Marlborough/West	144.390 APRS 147.270 224.880 449.925 927.700	☺ Reduced Coverage ☺ Reduced Coverage ☺ Reduced Coverage ☺ Reduced Coverage ☺ Off Air
Mendon	146.610	☺
Quincy	146.670 224.400	☺ Power Supply Replaced ☺ 4/21
Southborough	449.575	☺
Weston	146.790 +C4FM 224.700 442.700	☺ System Fusion Trial 4/24 ☺ Off Air - Back by 6/14 ☺



Minuteman
Repeater
Association

Have you renewed your membership yet?

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Highlights from the May Membership Meeting, continued

Annual Meeting: Officers Report to the Membership & Elections

Public Service Report

David Wolfe
KG1H

Public Service Activity Summary MMRA Member Participation

- ★ Ashland Half-Marathon & 5k, 27 Oct 13
- ★ Sutton Festival of lights, 07 Dec 13
- ★ Ashland Marathon Park Prep, 16 March 14
- ★ BAA 5k Marathon, 19 April 14
- ★ BAA Tribute Marathon, 19 April 14
- ★ BAA Marathon, 21 April 14
- ★ Groton Road Race, 27 April 14
- ★ Run of the Charles Canoe and Kayak race, 27 April 14
- ★ Project Bread Walk for Hunger, 04 May 14
- ★ Westford Apple Blossom Parade, 17 May 14
- ★ Brain Tumor Ride, 18 May 14
- ★ Heartbreak Hill Marathon and Half Marathon, 7 & 8 June 14
- ★ BAA 10K, 22 June 14
- ★ Bike MS: Minuteman Ride 2014, 19 July 14
- ★ Cystic Fibrosis Foundation Cycle for Life, 11 Oct 14



Value Added

- Be *proactive* when supporting events
 - Be *flexible* where the situation changes, it always does
 - Have a sense of humor
 - Be *effective*; hams besides being experienced communicators, have an extensive skill set; make use of them
 - EMTs, photography, net control, bus control, personnel supervision, etc.
- Identify areas where ham operators have been beneficial; as an example:
 - Support and Gear (SAG) vehicles; route sweeps to pick up stragglers; identify road safety/hazards; vehicle/event/participant conflicts; etc.
 - Rest Stops, medic transport, shadowing and logistical support
 - Help medical teams identify unsteady runners
 - Medical post/sweep communication
 - Safety teams
 - Parking/bus control
 - Tracking VIP runners for the awaiting media at the finish line
 - Locating missing parents
 - Etc.



Be proactive, be flexible and be effective

June Business Meeting ~ Bob Evans, Clerk, N1BE

The MMRA Board met for a business meeting at 7PM on June 18th at the headquarters of Stratus Technologies. In attendance were K1KWP, K1IW, W1DYJ, N1BDA, K1BOS, KB5JR, W1BRI, WA1NVC, N1BE, W3EVE and N1NVK.

Treasurer's report by Kevin, K1KWP: There has been virtually no financial activity since the close of the prior fiscal year. We reviewed expected expenses for the new fiscal year and expect to out-spend our income because of the remaining work to put MMRA antennas on the tower at MRW.

Repeater Report by Bob, K1IW: Marlboro 147.27 PA died. DR-1 from Weston was tried but it failed and has been returned to Yaesu for repair. In the meantime Bob tried a spare GM-300 portable repeater. Onsite measurement showed a diplexer failed and Bob took that home for repair.

We are still awaiting permission from the City of Marlborough to put MMRA antennas back on the MRW tower. *The board approved a motion that we are officially tired of dealing with the Slygo site issues.*

Bryan, W1BRI reported that Rick, K1RJZ is donating a 6-meter repeater at Hopkinton to the MMRA. Rick also is donating some hardline from Hopkinton. The Board considered using this equipment as a re-

mote receiver for the MMRA 53.81 MHz repeater. We also considered moving the MRF5000 900 MHz repeater that was previously at MRW and is now in storage in Weston to the Teneco Hopkinton site where the 223.94 repeater is located.

ARRL Convention booth: K1IW reports that 6 people signed up to staff the MMRA booth. As this is barely enough people, we would like a second person to staff during the hours when the booth is open. We need a list of expired and about to expire MMRA memberships. We also need application forms for collecting info with dues payments.

July MMRA get-together: The Board discussed alternatives for a meeting in July without reaching a consensus.

Speakers for meetings next year: K1IW sought volunteers to find speakers for next year. These people volunteered: N1BDA September, K1BOS November, W3EVE January, W1DYJ (weak signal vhf/uhf) March, W1IW (MMRA officers reports) May. K1IW will arrange for meeting venues as speakers are found.

Finally we previewed a vintage 1996 MMRA video. This will be shown at a future general membership meeting.

The meeting adjourned at 8:45 PM.

Testing Batteries

Thanks to Bruce Randell, W1ZE

Ever need to test your batteries without a meter? I had never heard of this before but pretty cool, watch to the end, only 90 seconds long, Bruce.

< www.youtube.com/embed/Y_m6p99I6ME >

**Next MMRA Business Meeting:
Wednesday 15 October, 7PM
Stratus, Maynard**

W1MPN new SEC for EMA

From the AUGUST 2014 ARRL EMA SECTION NEWS

I'd like to welcome as our new Section Emergency Coordinator **Mike Neilsen, W1MPN**. Our previous SEC, Rob Macedo, KD1CY, has decided to step down due to the demands of his professional work commitments. W1MPN is certainly no stranger to the position, having served previous terms as both Section Emergency Coordinator and Section Manager. Welcome aboard, Mike!

Section Manager (SM) - Phil Temples, K9HI

[Mike is one of our Directors—Ed.]

August Business Meeting ~ Bob Evans, Clerk, N1BE

The MMRA conducted a business meeting at 7:00 PM on August 20 at the headquarters of Stratus Technologies in Maynard, MA. K1KWP, K1IW, W1DYJ, N1BDA, WA1NVC, N1DDK, N1NVK, K1BOS, KG1H, N1BE, W1MPN, W3EVE and KB1LOY participated at this meeting.

Treasurer's Report:

The meeting opened with a treasurer's report by Kevin, K1KWP. We reviewed the current balance, current and expected spending for the 2014-2015 fiscal year, income and spending per fiscal year, power consumption at sites where MMRA pays for electricity and progress on member renewals for the new fiscal year.

MMRA participation in the **ARRL convention** in Hartford was essentially cost free since we collected dues to cover the club's costs. The MMRA sold 8 more **LARCAN transmitters** for a profit of about \$1160. It is not known whether additional LARCANS will be available for the MMRA to sell.

We reviewed costs of the MRW project in detail. One unexpected expense was \$1463 for two feedlines for the MRW antennas to be placed back on the Slygo tower. *We discussed how to summarize the entire project to better understand the complexity of the project and the value of many things donated to reduce cost to the MMRA.* Kevin's report finished with photos of the inside of the tank at the top of the tower. We are waiting for a tower climber to be available to replace the MMRA antennas on the tower; we are hopeful this will happen in the next several weeks.

Repeater Report:

Bob, K1IW gave a report of repeater status. A replacement Yaesu Fusion repeater is back online in Weston. In Mendon, the 146.61 antenna likely will move to a new tower. We had mixed reports of problems and fixes to the link receiver for the 6-Meter transmitter at MRE. In Burlington, we need new UPS batteries for the 146.75 repeater; the board decided to try running that site without a

UPS. We considered possibly using the UPS at MRW for 147.27; replacement batteries will cost about \$200.

New Business:

K1BOS brought to the meeting a proposal to link the Broadcast Engineers Amateur Radio Society network to the MMRA system. This is an internet link that would connect to their network at sites in New York, Florida and California. K1IW proposed that the Belmont site be used for the MMRA end of this link since there is Internet connectivity at Belmont. The board was in favor of moving forward with this proposal.

We next discussed speakers and locations for the general membership meetings in the coming year.

Dave, KG1H brought a proposal to the board that newly licensed amateurs at the MMRA VE sessions be offered a first year of individual membership at zero cost for dues. A motion to this effect was approved by the board.

K1IW brought a proposal that we consider perpetual (life) memberships for a cost of about 20 times the annual dues. The board needs time to consider this and to get input from members. We took no action on this issue.

Larry, W1DYJ noted that we need to replace one of the TIAOS net control operators who has been absent for the last few months.

The meeting adjourned at 8:45 PM.

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MMRA's *Technical, Informational and Other Stuff Net* needs another Net Control

Larry, W1DYJ, Net Manager

Those of you who participate in our Tuesday evening net (see page 11 for details) have probably noticed that now and then there is no net. *This is due to the need for another net control.* My requests:

1. If you would like to try your hand at being a net control, send me a note at w1dyj@mmra.org.

2. If you are waiting for the net to start and hear nothing by 8:05 pm, feel free to jump in and **BE** net control. The example script is below and on the MMRA web site.

Nets are important for both testing our equipment and improving our skills. Please consider the above.

TlaOS Net Script

7:55 This is [call], net control for this weeks MMRA technical, informational, and other stuff net. The net is scheduled to begin in 5 minutes at 8PM. Please make any last minute calls before the net at this time. Thank you. This is [call], [name] in [town].

8:00 This is [call], [name] in [town]. I am the net control for this week's MMRA technical, informational, and other stuff net. This net meets weekly @ 8 PM eastern time on the linked repeaters of the MMRA system. The system has over 20 repeaters on the 10, 6, 2, 1½M, and the 70 and 33cm bands plus EchoLink & IRLP. We also have an equal number of affiliated repeaters that can be linked.

Most of these repeaters are capable of being linked into one large system for public service and emergency communications. The primary purpose of this net is to test this linked system. This net also allows the exchange of any technical, informational, or other stuff related to Ham radio that the members of the net wish to announce or discuss. (*Good place to break.*)

I will go up the list of repeaters by frequency and accept check-ins from each repeater. I will then proceed back up the list asking for comments from each you. Note that I will ask for check-ins from the MMRA 6M, 2M and 220 repeaters, then EchoLink & IRLP, then the MMRA 440 and 900 repeaters, and finally all of the Affiliate Repeater.

This is very important: When checking-in, wait a good two seconds after keying up to talk as there are many links interconnecting. Then please say "This is" (then break to check for doubling, and key up again, wait that two seconds and give...) "your call, your name and your location."

This is an open system, so everyone is invited to check in. If you can hear me, you can check in! I will start with check-ins on the: Marlboro 53.81 repeater, PL of 71.9...

MMRA advertisement at some point... Remember to ask for late check-ins often... Remember to remind the members of the 2-second wait and to check for doubling...

End This is [call], net control and this is the conclusion of this weeks MMRA technical, informational, and other stuff net. Thank you to all the stations that checked in and thank you to all the stations that stood by while we held the net. Also thanks to all those people in the MMRA whose behind the scenes actions make this repeater network possible. The repeaters will stay linked until 11PM. Stations are encouraged to stay on the air and utilize the network. This is [call], [name] in [town], clear.

Upcoming MMRA Meetings

[Not the 3rd Wednesday]

Wed, 24 Sept ~ Membership Meeting
The Art and Science of Radio Direction Finding, Bob Ravenstein—W1FDR
Northborough Public Library

Wed, 15 Oct ~ Business Meeting
Stratus, Maynard

Saturday, 15 Nov ~ Membership Meeting
Our November meeting will be at the WTAG radio station transmitter in Holden. Don't miss this special event!

Wed, 17 Dec ~ Business Meeting
Stratus, Maynard

Wed, 21 Dec ~ Membership Meeting
Amateur Radio and the Weather, Mike Neilsen—W1MPN
Location TBA

Wed, 18 Feb ~ Business Meeting
Stratus, Maynard

Wed, 18 Mar ~ Membership Meeting
Weak Signals and DX'ing
Location TBA

Wed, 15 Apr ~ Business Meeting
Stratus, Maynard

Wed, 20 May ~ Membership Meeting
Annual Meeting: Officers Report and General Elections
Location TBA

Wed, 17 June ~ Business Meeting
Stratus, Maynard

Wed, 21 July ~ Mid-summer Get Together
Location TBA

Wed, 19 Aug ~ Business Meeting
Stratus, Maynard

Don't Forget! Join Us.

Every Tuesday @ 8 PM
Technical, Informational and Other Stuff Net

The MMRA's repeaters are linked Tuesday nights for the TlaOS Net. Keep up with what's happening in the MMRA and ask your ham related questions.

Want to try your hand at Net Control? Contact me at W1DYJ@mmra.org – we have a script you can use.

Current Net Control Operators:

Week 1	WA1JIM	Jimmy Devaire
Week 2	W1DYJ	Larry Banks
Week 3	??????	OPEN
Week 4	K1KWP	Kevin Paetzold
Week 5	W1DYJ	Larry Banks

To connect using Echolink / IRLP during the Net:

- Echolink Conference *NEW-ENG2*
- IRLP node 4133

MMRA Leaders

Officers

President	Bob DeMattia	K1IW
Vice President	Steve Telsey	N1BDA
Secretary	John McGovern	W1JMC
Treasurer	Kevin Paetzold	K1KWP
Clerk	Bob Evans	N1BE
* Technical Officer	Bryan Cerqua	W1BRI

Board of Directors

Director »2015	Steve Schwarm	W3EVE
Director »2015	Roger Coulson	WA1NVC
Director »2016	Clark Conti	N1NVK
Director »2016	Mike Neilsen	W1MPN

Repeater Trustees

* Belmont 145.430	James Lee	N1DDK
* Boston 927.0625	Rick Zach	K1RJZ
* Boston 146.820	John Mullaney	K1BOS
* Brookline 146.820 Rcvr	Bob Phinney	K5TEC
* Burlington 146.715	Bruce Pigott	KC1US
* Burlington 446.775	Larry Banks	W1DYJ
* Hopkinton 223.940	James Cahill	KB1LOY
* Lowell 442.250	Vince De La Flor	K1LVF
* Marlboro 53.810; Quincy 146.670; Southboro 449.575	Bryan Cerqua	W1BRI
* Marlboro 144.390, 147.270, 224.880, 449.925, 927.700	Bill Northup	N1QPR
Weston 442.700 — all as W1MRA	Jim Podsiadlo	AE1C
* Mendon 146.610	Bill Dunn	N1KUG
* Quincy 224.40	Bob Evans	N1BE
* Weston 146.790	Eddie Mulhern	N1NOM
* Weston 224.700		

Other, non-Voting

* Newsletter Editor	Larry Banks	W1DYJ
* Emerg. Coord.	Kevin Paetzold	K1KWP
* Pub. Serv. Coord.	David Wolfe	KG1H
* VEC Liaison	Bill Wade	K1IJ
* Net Manager	Larry Banks	W1DYJ
* Web Page Editor	Bob DeMattia	K1IW

** Appointed*

Previous issues of the MMRA Newsletter are available at:
www.mmra.org → [Newsletter Archive](#) (on the left)

MMRA VE Sessions

Oct 11, Nov 8, Dec 13

9 AM at the Marlboro Public Library

Contact: Bill Wade, K1IJ 781-891-9079
Evenings 6 - 10 PM Weekends 8 AM to 10 PM.

Membership Meeting ~ Wednesday, Sept 24 ~ 7 PM
The Art and Science of Radio Direction Finding
Bob Ravenstein, W1FDR

Location: Northborough Public Library
Talkin: 147.27

Calendar of Ham Radio Flea Markets

See this web site for more information: <http://mit.edu/w1gsl/Public/ne-fleas>

20 Sep	Forestdale RI	RIAFMRS @VFW
20 Sep	Riverview NB	MAARC @Lions
20 Sep	Alexander ME	StCVARC @e1Sch
21 Sep	Cambridge MA	FLEA at MIT
27 Sep	Brookline NH	NEARC Antique
5 Oct	Queens NY	HoSARC
10,11 Oct	Deerfield NH	NEARfest XVI @FG
12 Oct	Meriden CT	Nutmeg @Sheraton
12 Oct	Fishkill NY	MtBARC @Corectional
18,19 Oct	Wakefield MA	Photographica
	@AmericalCt	
19 Oct	Cambridge MA	FLEA at MIT
25 Oct	Gales Ferry CT	TCARC Auction
	@FireCo	

26 Oct	Hicksville NY	LIMARC
	@Levittown Hall	
8 Nov	Bourne MA	FARA @UpperCC
29 Nov	Windsor CT	VR+C Mus
	115 Pierson LN	
—2015—		
7 Mar	Chicopee MA	MtTomARA @MooseLodge
27,28 Mar	Lewiston ME	AARC ME Conv @Ramada
1,2 May	Deerfield NH	NEARfest XVII @FG
6 Jun	Hermon ME	PSARA @8 @HS
21,23 Aug	Boxboro MA	FEMARA NE Conv

THE MINUTEMAN REPEATER ASSOCIATION

MMRA
P.O. Box 669
Stow, MA. 01775-0669

Email: contact@mmra.org



WE'RE ON THE WEB
[HTTP://WWW.MMRA.ORG/](http://www.mmra.org/)

Have you renewed your membership yet?

All 2014 memberships expired on August 31st!
Time to renew either on the Member's login link at www.mmra.org or by U.S. Mail with a check to MMRA, PO Box 669, Stow, MA 01665.